

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): ~~An~~ A NO_x removal catalyst management unit for use with an NO_x removal apparatus, the management unit being provided for managing a plurality of NO_x removal catalyst layers provided in a flue gas NO_x removal apparatus, characterized in that the management unit comprises NO_x measurement means for determining NO_x concentrations on the inlet and outlet sides of respective NO_x removal catalyst layers; NH₃ measurement means for determining NH₃ concentrations on the inlet and outlet sides of the same NO_x removal catalyst layers; and percent NO_x removal determination means for determining percent NO_x removal (η) on the basis of an inlet mole ratio (i.e., inlet NH₃/inlet NO_x), the inlet mole ratio being derived from ~~an~~ a NO_x concentration which is ~~an~~ a NO_x concentration as measured on the inlet side by means of said NO_x measurement means and an NH₃ concentration which is an NH₃ concentration as measured on the inlet side by means of said NH₃ measurement means; an NH₃ concentration which is an NH₃ concentration as measured on the inlet side; an NH₃ concentration which is an NH₃ concentration as measured on the outlet side; a NO_x concentration which is a NO_x concentration as measured on the outlet side: and an evaluation mole ratio which is predetermined for the purpose of evaluating respective NO_x removal catalyst layers or plurality of NO_x catalyst layers, wherein the percent NO_x removal (η) is determined on the basis of the following equation (1):

$$\eta = \frac{\{(\text{inlet NH}_3 - \text{outlet NH}_3)/(\text{inlet NH}_3 - \text{outlet NH}_3 + \text{outlet NO}_x)\} \times 100 \times (\text{evaluation mole ratio/inlet mole ratio})}{(1)}.$$

2. (canceled).

3. (canceled).

4. (currently amended): ~~An~~ A NO_x removal catalyst management unit according to ~~any~~ of claims claim 1 to 3 for use with ~~an~~ a NO_x removal apparatus, which management unit further includes transmission means for transmitting concentration values determined by the NO_x measurement means and the NH₃ measurement means to the percent NO_x removal determination means, wherein the percent NO_x removal determination means determines the percent NO_x removal (η) of respective NO_x removal catalyst layers included in a plurality of flue gas NO_x removal apparatuses.

5. (currently amended): A method for managing ~~an~~ a NO_x removal catalyst for use with ~~an~~ a NO_x removal apparatus, the method being provided for managing a plurality of NO_x removal catalyst layers provided in a flue gas NO_x removal apparatus, characterized in that the method comprises determining NO_x concentrations and NH₃ concentrations on the inlet and outlet sides of respective NO_x removal catalyst layers; determining percent NO_x removal (η) on the basis of an inlet mole ratio (i.e., inlet NH₃/inlet NO_x); an NH₃ concentration which is an NH₃ concentration as measured on the inlet side; an NH₃ concentration which is an NH₃ concentration as measured on the outlet side; a NO_x concentration which is a NO_x concentration as measured

on the outlet side; and an evaluation mole ratio which is predetermined for the purpose of evaluating respective NO_x removal catalyst layers or plurality of NO_x catalyst layers; and evaluating performance of respective NO_x removal catalyst layers on the basis of the percent NO_x removal (η), the inlet mole ratio being derived from an NO_x concentration which is an a NO_x concentration as measured on the inlet side and an NH₃ concentration which is an NH₃ concentration as measured on the inlet side; and wherein the percent NO_x removal (η) is determined on the basis of the following equation (1):

$$\eta = \frac{\{(\text{inlet NH}_3 - \text{outlet NH}_3)/(\text{inlet NH}_3 - \text{outlet NH}_3 + \text{outlet NO}_x)\} \times 100 \times (\text{evaluation mole ratio/inlet mole ratio})}{(1)} \quad (1).$$

6. (canceled).

7. (canceled).

8. (currently amended): A method according to ~~any of claims~~ claim 5 ~~to 7~~ for managing ~~an~~ a NO_x removal catalyst for use with ~~an~~ a NO_x removal apparatus, wherein the method further comprises performing restoration treatment of ~~an~~ a NO_x removal catalyst layer having a catalytic performance deteriorated to a predetermined level, on the basis of results of performance evaluation of the respective NO_x removal catalyst layers.

9. (currently amended): A method according to claim 8 for managing ~~an~~ a NO_x removal catalyst for use with ~~an~~ a NO_x removal apparatus, wherein the performance restoration treatment is replacement of the NO_x removal catalyst layer with a new NO_x removal catalyst layer,

replacement of the NO_x removal catalyst layer with a regenerated NO_x removal catalyst layer, replacement of the NO_x removal catalyst layer with an NO_x removal catalyst layer inverted with respect to the direction of the flow of discharge gas, or replacement of the NO_x removal catalyst layer with an NO_x removal catalyst layer from which a deteriorated portion has been removed.

10. (currently amended): A method according to any of claims 5 to ~~7~~ and 8 for managing ~~an~~ a NO_x removal catalyst for use with ~~an~~ a NO_x removal apparatus, wherein the method further comprises determining the percent NO_x removal of respective NO_x removal catalyst layers included in a plurality of flue gas NO_x removal apparatuses and evaluating catalytic performance of respective NO_x removal catalyst layers included in a plurality of flue gas NO_x removal apparatuses.

11. (canceled).

12. (currently amended): A method according to claim 9 for managing ~~an~~ a NO_x removal catalyst for use with ~~an~~ a NO_x removal apparatus, wherein the method further comprises determining the percent NO_x removal of respective NO_x removal catalyst layers included in a plurality of flue gas NO_x removal apparatuses and evaluating catalytic performance of respective NO_x removal catalyst layers included in a plurality of flue gas NO_x removal apparatuses.